



DEPARTMENT OF TRANSPORTATION
MATERIALS TRANSPORTATION BUREAU
WASHINGTON, D.C. 20590

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DEPARTMENT OF TRANSPORTATION

Materials Transportation Bureau

49 CFR Parts 172, 173, 177, 178, 179

[Docket No. HM-166D; Amdt. Nos. 172-61, 173-141, 177-50, 178-63, 179-26]

Hazardous Materials Regulations;
Miscellaneous Amendments

AGENCY: Materials Transportation Bureau (MTB), Research and Special Programs Administration, DOT.

ACTION: Final rule.

SUMMARY: This action is being taken to incorporate into the Department's Hazardous Materials Regulations a number of changes based on rulemaking petitions from industry and from petitions within the Department. This action is necessary to update the regulations and to reduce MTB's backlog of rulemaking petitions.

EFFECTIVE DATE: September 18, 1980, except for § 172.203(f) which will become mandatory July 1, 1983.

FOR FURTHER INFORMATION CONTACT: Darrell L. Raines, Chief, Exemptions and Regulations Termination Branch, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Research and Special Programs Administration, 400 7th Street, S.W. Washington, D.C. (202-472-2726).

SUPPLEMENTARY INFORMATION: On April 14, 1980, the Materials Transportation Bureau published a Notice of Proposed Rulemaking, Docket No. HM-166D, Notice No. 80-6 (45 FR 25083), which proposed a number of miscellaneous amendments to the Hazardous Materials Regulations. Notice No. 80-6 included a brief statement regarding each proposal and invited public comments prior to the closing date of June 15, 1980. Based on comments received on this notice, these proposals are being incorporated as final amendments to the Hazardous Materials Regulations.

The MTB received eight comments on Notice No. 80-6. Two commenters supported the proposed changes except they felt that MTB should have included all of the changes that were proposed by the Chemical Manufacturers Association (CMA), formerly known as the Manufacturing Chemist Association, in their petition (P-440) of May 18, 1978. In the initial draft of Notice 80-6, it was proposed to adopt all of the changes proposed by CMA. However, upon further review, it was determined that the proposed changes pertaining to special commodity requirements for new construction of MC-312 cargo tanks and for certain tanks cars are too complex to be included in this particular docket. A separate notice of proposed rulemaking on the remaining portion of petition P-440 will be considered at a later date.

The proposed correction for Strychnine, solid in Column (5)(b) of § 172.101 was included in the revised Hazardous Materials Table published on May 22, 1980, (45 FR 34560) and therefore, no correction appears in this document.

The significant changes made in this rulemaking that are different from the notice are (1) the word "flammable" has been added as part of the shipping name for the proposed entry "Poisonous liquid or gas, n.o.s.", (2) an editorial change has been made in § 172.502(c), and (3) in order to avoid unnecessary expenses and to allow sufficient time for shippers to deplete existing stock of pre-printed shipping papers now on hand, or on order, the mandatory effective date of the provisions of § 172.203(f) has been extended to July 1, 1983. Because of this effective date, the proposed change of "Cargo-only aircraft" to "Cargo aircraft only" (other than in § 172.203(f)) will be phased in gradually throughout the Hazardous Materials Regulations during that time period.

Two commenters objected to the proposed deletion of § 173.264(a)(1), which authorizes the use of certain specification wooden boxes with inside

containers made of various materials. One commenter requested that the Specification 15A wooden box not be deleted. Another commenter stated that they use all of the wooden boxes authorized in § 173.264(a)(1). In view of the comments received, reference to the various materials used in the inside containers has been deleted and general language authorizing acid resistant type containers has been added.

For clarity, one commenter requested that the words "or other means" be added to § 177.838(a) and this change has been made.

Three commenters requested minor changes to the proposed wording of § 178.0-3. That section has been revised to allow packagings to be marked with the United Nations symbol and packaging identification code as specified in Annex 1 of the IMCO Code.

In consideration of the foregoing, 49 CFR Parts 172, 173, 177, 178, and 179 are amended as follows:

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

1. In § 172.101 the Hazardous Materials Table is amended by revising or adding as indicated the entries listed below:

BILLING CODE 4910-80-M

§172.101 Hazardous Materials Table

(1) +/ E/ A/ W/	(2) Hazardous materials descriptions and proper shipping names.	(3) Hazard class	(4A) Identifying number	(4) Label(s) required (if not excepted)	(5) Passenger		(6) Maximum net quantity in one package		(7) Water shipments		
					(a) Exception	(b) Specific requirements	(a) Passenger carrying aircraft or railroad	(b) Cargo only air- craft	(a) Cargo vessel	(b) Pass- enger vessel	(c) Other requirements
	(Revise)										
	Arsine	Poison A	UN2188	Poison gas and flamm- able gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
+	Chloropicrin and methyl chloride mixture	Poison A	UN1582	Poison gas and flamm- able gas	None	173.329	Forbidden	Forbidden	1	5	Keep cool. Segregation same as for flammable gases.
	Cyanogen gas	Poison A	UN1026	Poison gas and flamm- able gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
	Germane	Poison A	UN2192	Poison gas and flamm- able gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
E	Hydrocyanic acid (prussic) solution (5% or more hydro- cyanic acid) (RC=10/4, 34)	Poison A	UN1613	Poison gas and flamm- able gas	None	173.332	Forbidden	Forbidden	1	5	Shade from radiant heat. Aqueous solutions containing more than 20 percent hydrogen cyanide are not permitted in transportation by water. Segregation same as for flammable gases.
E	Hydrocyanic acid, liquefied (RC=10/4, 54)	Poison A	NA1051	Poison gas and flamm- able gas	None	173.332	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
	Phosphine	Poison A	UN2199	Poison gas and flamm- able gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
	(Add) Poisonous liquid or gas, flammable, n.o.s. (Delete)	Poison A	NA1953	Poison gas and flamm- able gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
A	Manganese dioxide	ORM-B	NA1479	None	173.505	173.510	No limit	No limit			

In § 172.203, paragraph (f) is revised to read:

§ 172.203 Additional description requirements.

(f) *Transportation by air.* When a package containing a hazardous material is offered for transportation by air and this subchapter prohibits its transportation aboard passenger-carrying aircraft, the words "Cargo aircraft only" must be entered after the basic description. However, until July 1, 1983, the words "Cargo-only aircraft" may be used.

3. In § 172.502, the introductory text of paragraph (a) is revised; paragraph (c) is added as follows:

§ 172.502 Prohibited placarding.

(a) Except as provided in paragraph (c) of this section, no person may affix or display on a portable tank, freight container, motor vehicle or rail car any placard described in this subpart unless—

(c) The restriction in paragraphs (a) and (b) of this section do not apply to portable tanks, freight containers, motor vehicles or rail cars which, in addition to any placards required by this Part, may be placarded in conformance with the IMCO Code.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

4. In § 173.63, paragraph (a)(3) is revised to read:

§ 173.63 High explosives with liquid explosive ingredient.

(3) Specification 23F or 23H (§ 178.214 or § 178.219 of this subchapter). Fiberboard boxes having one inside 28-gauge metal container, measuring not over 8 inches in diameter and 31 inches long, containing high explosives (ammonium dynamite core) surrounded by a material classed as a blasting agent. Authorized gross weight not to exceed 65 pounds.

5. In § 173.93, paragraph (a)(4) is revised to read:

§ 173.93 Propellant explosives (solid) for cannon, small arms, rockets, guided missiles, or other devices, and propellant explosives (liquid).

(4) Tight metal cases in tight wooden boxes, not over 200 pounds gross weight;

or tight metal containers not over 200 pounds gross weight.

6. In § 173.157, paragraphs (a)(3), (a)(5), (b)(1), and (b)(3) are revised to read:

§ 173.157 Benzoyl peroxide, chlorobenzoyl peroxide (para), cyclohexanone peroxide, dimethylhexane dihydroperoxide, lauroyl peroxide, or succinic acid peroxide, wet.

(3) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with inside fiber containers securely closed by taping or gluing, or with securely closed inside paper bags lined with polyethylene at least 0.002 inch thick. The net weight (dry weight) in each inside container may not exceed 1 pound. Except for lauroyl peroxide, wet, each inside container must be surrounded by an appropriate fire-resistant cushioning material. The gross weight in Specification 12B65 fiberboard boxes may exceed 65 pounds, but may not exceed 80 pounds, provided the net weight (dry weight) of the contents does not exceed 50 pounds.

(5) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with securely closed inside plastic containers made of polyethylene film at least 0.004 inch thick. The net weight (dry weight) in each inside container may not exceed 25 pounds. Each inside container must be surrounded by an appropriate fire-resistant cushioning material. Authorized only for benzoyl peroxide.

(1) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with securely closed inside paper bags lined with polyethylene at least 0.002 inch thick. The net weight (dry weight) in each bag may not exceed 1 pound. Each bag must be surrounded by an appropriate fire-resistant cushioning material.

(3) Specification 12B (§ 178.205 of this subchapter). Fiberboard box with securely closed inside plastic containers made of polyethylene film at least 0.004 inch thick. The net weight (dry weight) in each inside container may not exceed 25 pounds. Each inside container must be surrounded by an appropriate fire-resistant cushioning material. The net weight (dry weight) in each outside box may not exceed 50 pounds.

7. In § 173.158, paragraphs (a)(1) and (a)(3) are revised to read:

§ 173.158 Benzoyl peroxide, dry; chlorobenzoyl peroxide (para) dry; cyclohexanone peroxide, dry; lauroyl peroxide, dry; or succinic acid peroxide, dry.

(1) Specification 15A or 15B (§ 178.168 or § 178.169 of this subchapter). Wooden boxes, with inside fiber containers securely closed by taping or gluing or inside securely closed paper bags lined with 0.002 inch thick polyethylene, not over 1 pound capacity each. Except for lauroyl peroxide, dry, each inside container must be surrounded by an appropriate fire-resistant cushioning material. The net weight in outside container must not exceed 50 pounds, except that for lauroyl peroxide, dry, a net weight not over 100 pounds is authorized.

(3) Specification 12B (§ 178.205 of this subchapter). Fiberboard boxes, with inside fiber containers securely closed by taping or gluing, or inside securely closed paper bags lined with polyethylene not less than 0.002 inch thick, not over 1 pound capacity each. Except for lauroyl peroxide, dry, each inside container must be surrounded by an appropriate fire-resistant cushioning material. The gross weight in Specification 12B65 boxes may be more than 65 pounds, but not more than 80 pounds, provided the net weight of contents does not exceed 50 pounds.

8. In § 173.178, the last sentence of paragraph (a)(1) is revised to read:

§ 173.178 Calcium carbide.

(1) *** Maximum rated capacity may not exceed 60 gallons.

9. In § 173.191, paragraph (a)(4) is deleted as follows:

§ 173.191 Phosphorus pentachloride.

(4) [Reserved]

10. In § 173.245, paragraphs (a)(8) and (a)(11) are deleted as follows:

§ 173.245 Corrosive liquids not specifically provided for.

(8) [Reserved]

(11) [Reserved]

11. In § 173.249, the introductory text of paragraph (b) is revised to read:

§ 173.249 Alkaline corrosive liquids, n.o.s.; alkaline liquids, n.o.s.; alkaline corrosive battery fluid; potassium fluoride solution; potassium hydrogen fluoride solution; sodium aluminate, liquid; sodium hydroxide solution; potassium hydroxide solution; boiler compound, liquid, solution.

(b) The hazardous materials named in paragraph (a) of this section, when offered for transportation by aircraft, must be packaged as follows (also authorized for transportation by rail freight, highway or water):

12. In § 173.252, the second sentence of paragraph (g)(3) is revised to read:

§ 173.252 Bromine.

(g) * * *
(3) * * * Each bottle must be enclosed in a strong metal can surrounded with an appropriate fire-resistant cushioning material. * * *

13. In § 173.253, paragraph (a)(2) is revised to read:

§ 173.253 Chloroacetyl chloride.

(a) * * *
(2) Specification IM (§ 178.17 of this subchapter). Glass carboys in expanded polystyrene packagings. Not authorized for transportation by aircraft.

14. In § 173.257, paragraph (a)(2) is deleted as follows:

§ 173.257 Electrolyte (acid) alkaline corrosive battery fluid.

(a) * * *
(2) [Reserved]

15. In § 173.261, paragraph (b)(2) is revised to read:

§ 173.261 Fire-extinguisher charges.

(b) * * *
(2) Fire-extinguisher charges, consisting of chlorosulfonic acid in a hermetically sealed bottle not exceeding 2 ounces capacity, securely packed in a metal container inclosed in another metal container, the inner metal container being cushioned in the outer metal container with an appropriate fire-resistant cushioning material and the completed package embedded in potassium carbonate in outside fiberboard or wooden boxes.

16. In § 173.264, paragraphs (a)(1), the introductory text of paragraph (a)(8), paragraphs (a)(11) and (a)(19) are revised; paragraph (a)(7), Notes (1) (2) (3) (4) and (5) and footnote for paragraph (8) and (11) are deleted as follows:

§ 173.264 Hydrofluoric acid; White acid.

(a) * * *
(1) Specification 15A, 15B, 15C, 16A, or 19A (§§ 178.168, 178.169, 178.170, 178.185, 178.190 of this subchapter) Wooden boxes with inside containers which are hydrofluoric acid resistant. These containers are authorized only for strengths of acid for which they are adequate, but in no case may the strength of acid exceed 70 percent.

(7) [Reserved]
Note 1.—[Deleted]
Note 2.—[Deleted]
Note 3.—[Deleted]
Note 4.—[Deleted]
Note 5.—[Deleted]

(8) Specification 103AW, 105A100W, 111A100F2, 111A60W2, 111A100W4 (§§ 179.100, 179.101, 179.200, 179.201 of this subchapter). Unlined metal tanks which have been subjected to adequate passivity or neutralization process. Each metal container, before being put into service must be passivated by an efficient method. Authorized only for hydrofluoric acid of 60 to 80 percent strength. If tanks are washed out with water they must be resubjected to passivity before reshipment. * * *

(11) Specification 103BW, 111A100W4, or 111A60W5 (§§ 179.200, 179.201 of this subchapter). Tank cars, rubber-lined tanks. Authorized only for acid not over 40 percent strength except Specification 111A100W4 tanks are authorized only for acid of 70 percent strength.

(19) Specification 12P (§ 178.211 of this subchapter). Fiberboard boxes with one inside Specification 2U (§ 178.24 of this subchapter) polyethylene container of not over 5-gallon capacity or two inside Specification 2U polyethylene containers of not over 2½-gallon capacity each. Authorized only for acid of 48 to 52 percent.

17. In § 173.266 paragraphs (b)(1) and (c)(4) are revised to read:

§ 173.266 Hydrogen peroxide solution in water.

(b) * * *
(1) Specification 15A, 15B, 15C, 16A, or 19A (§§ 178.168, 178.170, 178.185, 178.190 of this subchapter). Wooden boxes with glass or earthenware inside containers of not more than 1-gallon capacity each. Inside containers must be well cushioned with an appropriate fire-resistant cushioning material. Cushioning of inside containers in outside wooden boxes by means of elastic packing, such as wooden strips

or large corks fastened securely in position, is authorized if the complete package will pass the swing test prescribed for boxed carboys in Specification 1A (§ 178.1 of this subchapter).

(c) * * *
(4) Specification 15A, 15B, 15C, 16A, or 19A (§§ 178.168, 178.169, 178.170, 178.185, 178.190 of this subchapter). Wooden boxes with inside containers of polyethylene, or other plastic material resistant to the liquid, not over 1-pint capacity of 16 ounces by weight each. Inside containers must be securely cushioned with an appropriate fire-resistant cushioning material.

18. In § 173.267, paragraph (c)(3) is revised to read:

§ 173.267 Mixed acid (nitric and sulfuric acid) (nitrating acid).

(c) * * *
(3) Each bottle must be placed in a tightly closed metal container and well cushioned therein on all sides with an appropriate fire-resistant cushioning material. The metal container must be packed in the outside container, and well cushioned by incombustible mineral packing material.

19. In § 173.268 Paragraphs (h) and (i)(3) are revised to read:

§ 173.268 Nitric acid.

(h) Cushioning inside containers. Inside containers must be well cushioned. Except as provided in subparagraph (1) of this paragraph, all material for cushioning must be incombustible mineral material such as whiting, mineral wool, infusorial earth (Kieselguhr), sifted ashes, etc. The use of hay, excelsior, ground cork, or similar material, whether treated or untreated, is prohibited. Where the cushioning material is very fine or powdery, separate partitions for the individual inside containers shall be provided to prevent bottles from shifting and coming in contact with each other, and the box must be tight to prevent sifting of cushioning material.

(i) * * *
(3) Each bottle must be placed in a tightly closed metal container, and well cushioned therein on all sides with an appropriate fire-resistant cushioning material. The metal container must be packed in outside containers, and well cushioned by incombustible mineral packing material.

20. In § 173.269 Paragraph (e) is revised to read:

§ 173.269 Perchloric acid.

(e) Inside containers must be well cushioned with an appropriate fire-resistant cushioning material. The use of hay, excelsior, ground cork, or similar material either treated or untreated, is prohibited. Where the cushioning material is very fine or powdery, separate partitions for the individual inside containers should be provided to prevent the bottles from shifting and coming in contact with each other, and the box must be tight to prevent sifting of cushioning material.

21. In § 173.271 paragraph (a)(19) is added to read:

§ 173.271 Phosphorus oxybromide, phosphorus oxychloride, phosphorus trichloride, and thiophosphoryl chloride.

(a) * * *
(19) Specification 1M (§ 178.17 of this subchapter). Glass carboys in expanded polystyrene packagings. Authorized only for phosphorus oxychloride. Not authorized for transportation by aircraft.

22. In § 173.274, Note 1 of paragraph (a)(1) is revised to read:

§ 173.274 Fluosulfonic acid.

(a) * * *
(1) * * *

*. Note 1.—Bottles manufactured of Pyrex glass or glass of equal acid resistance, authorized only for material containing an excess of sulfur trioxide, with Pyrex glass stoppers, or glass stoppers of equal acid resistance, ground to fit and held in place by plaster of Paris covered by strong cloth securely tied; each bottle must be placed in a metal container, well cushioned therein with an appropriate fire-resistant cushioning material.

23. In § 173.287, paragraph (b)(4) is revised to read:

§ 173.287 Chromic acid solution.

(b) * * *
(4) Specification 12A or 12B (§§ 178.210 or 187.205 of this subchapter). Fiberboard box with one inside glass container not over 4-fluid ounce capacity, packed in a wax-lined cylindrical fiber carton with metal ends. The bottle closure must consist of a tightly secured, fitted, ground glass stopper. Space between the bottle and the inner surface of the fiber cylinder must be filled with an appropriate fire-resistant cushioning material in sufficient quantity to completely absorb the contents of the bottle in the event of breakage. Not authorized for solutions containing nitric acid.

PART 177—CARRIAGE BY PUBLIC HIGHWAY

24. In § 177.838, the last sentence of paragraph (a) is revised to read:

§ 177.838 Flammable solids and oxidizing materials.

(a) * * * Shipments in water-tight bulk containers do not have to be covered by a tarpaulin or other means.

PART 178—SHIPPING CONTAINER SPECIFICATIONS

25. In § 178.0, § 178.0-3 is added to read:

§ 178.0 Purpose, scope, and applicability.

§ 178.0-3 United Nations symbol and packaging identification code.

(a) In addition to the markings required by this subchapter, packagings may be marked with the United Nations symbol and packaging identification code as provided in Annex 1 of the IMCO Code, provided the person applying these markings has established that the packaging conforms to the applicable provisions of Annex 1 of the IMCO Code.

(1) If an indication of the country in which tests have been carried out is required, the letters "USA" shall be used.

(2) If an indication of "the name of the manufacturer or other identification of the packaging as specified by the competent authority" is required, the name and address or symbol of the person making the mark shall be entered. Symbols, if used, must be registered with the Associate Director for OE. Duplicate symbols are not authorized.

26. In § 178.172, § 178.172-18 paragraph (a) is revised to read:

§ 178.172 Specification 15E; wooden boxes, fiberboard lined.

§ 178.172-18 Closing for shipment.

(a) Box shall be securely closed. Nails, if used, shall be as prescribed in §§ 178.172-9, 178.172-10, 178.172-11, and 178.172-12.

PART 179—SPECIFICATIONS FOR TANK CARS

27. In § 179.201, § 179.201-7(b) is revised to read:

§ 179.201 Individual specification requirements applicable to non-pressure tank car tanks.

§ 179.201-7 Safety relief devices.

(a) * * *
(b) Safety vents, if used, shall be of approved design, at least 1¾ inches inside diameter, made of material not subject to rapid deterioration by the lading, and closed with a frangible disc of lead or other approved material of a thickness that will burst at not more than 100 percent of tank test pressure. Means for holding the disc in place shall be such as to prevent distortion or damage to the disc when applied. The safety vent closure shall be chained or otherwise fastened to prevent misplacement.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53 and App. A to Part 1)

Note.—The Materials Transportation Bureau has determined that this document will not result in a major economic impact under the terms of Executive Order 12044 and DOT implementing procedures (44 FR 11034), nor a required environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et seq.). A regulatory evaluation and environmental assessment are available for review in the docket.

Issued in Washington, D.C., on September 3, 1980.

L. D. Santman,

Director, Materials Transportation Bureau.

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